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SENATE

REPORT
100-431

OCEAN DUMPING REFORM ACT OF 1988

JULY 26, 1988.—Ordered to be printed

Mr. BURDICK, from the Committee on Environment and Public Works, submitted the following

REPORT

[To accompany S. 2030]

together with

ADDITIONAL VIEWS

The Committee on Environment and Public Works to which was referred the bill (S. 2030) to amend the Marine Protection, Research, and Sanctuaries Act having considered the same, reports favorably thereon with an amendment and recommends that the bill as amended do pass.

GENERAL STATEMENT

This legislation amends title I of the Marine Protection, Research, and Sanctuaries Act which regulates the dumping, and the transportation for the purpose of dumping, of material into ocean waters.

The bill establishes a framework for ending the ocean dumping of sewage sludge. It prohibits any person who is not now ocean dumping sewage sludge from beginning to dump. For existing dumpers, the bill prohibits the dumping of sewage sludge within six months of the bill's enactment unless the dumper has entered into a compliance agreement to end the dumping of sewage sludge, and makes it unlawful to ocean dump sewage sludge after December 31, 1991. It requires the Governors of New York and New Jersey to report to the Environmental Protection Agency (EPA) annually on the progress being made in implementing the schedules

S323-8

to end ocean dumping and requires EPA to report to Congress on the progress.

The bill establishes civil penalties for violations which exceed the costs of implementing land-based alternatives, and permit fees to cover the costs of monitoring and any associated research and to determine compliance with the Act. Penalties and fees will be deposited in a newly established Clean Oceans Fund to be used by EPA and the Coast Guard to implement the Ocean Dumping Act and by EPA to implement technologies and management practices necessary for controlling pollutant inputs adversely affecting the New York Bight.

The bill also requires EPA and NOAA to conduct a monitoring program at sewage sludge dump sites and surrounding waters which may be affected by ocean dumping of sewage sludge. EPA is required to report on progress in using electronic surveillance to monitor sewage sludge dumping.

Finally, the bill adds the Barataria-Terrebonne Estuary Complex in Louisiana to the list of estuaries included in the National Estuary Program established in the Clean Water Act Amendments of 1987.

BACKGROUND

Title I of the Marine Protection, Research and Sanctuaries Act, otherwise known as the Ocean Dumping Act (33 U.S.C. 1401 et seq.) authorizes EPA to regulate the dumping and the transportation for the purpose of dumping, of materials, including sewage sludge, into the ocean. Pursuant to title I, EPA issues permits for ocean dumping pursuant to criteria it is required to publish and designates ocean dumping sites. EPA shares responsibility for administration of the Act with the Army Corp of Engineers, which regulates dumping of dredged spoils, the National Oceanic and Atmospheric Administration, which is responsible for monitoring the environment at and around dump sites, and with the Coast Guard which has the responsibility for surveillance of dumpers.

Sewage sludge dumping in the ocean has gone on since the 1920's. Subsequent to the enactment of the Ocean Dumping Act in 1972, EPA sought to phase out ocean dumping of sewage sludge. Sludge dumping in the ocean was thought to pose greater risks to the marine environment than discharge of treated municipal sewage wastewater because the sludge contains pathogens, metals, and other toxic contaminants removed from the wastewater.

Frustrated by delays in ending the sludge dumping, the Congress, in 1977, enacted amendments to the Ocean Dumping Act providing a statutory deadline of December 31, 1981 to end the ocean dumping of all sewage sludge (Public Law 95–153, codified at 33 U.S.C. 1412a). Sewage sludge was defined, however, to mean sludge which "unreasonably degraded the marine environment."

Over 150 municipalities, including the City of Philadelphia, shifted to land disposal of sludge. According to EPA, 94 percent of all sewage sludge generated in the United States is managed on land. A number of municipalities in the New York area, however, argued that they could not develop alternatives by the 1981 deadline because of the toxicity of their sludge and the limited avail-

ability of land disposal sites. The dumpers are New York City and Nassau and Westchester Counties in New York and from New Jersey, the Bergen County Utilities Authority, the Joint Meeting of Essex and Union Counties, the Linden Roselle Sewerage Authority, the Middlesex County Utilities Authority, the Passaic Valley Sewerage Commission and the Rahway Valley Sewerage Authority.

When EPA tried to force New York City to end ocean dumping of sewage sludge in 1981, the City brought suit against EPA arguing that its sludge did not "unreasonably" degrade the environment because ocean dumping was environmentally preferable to land-based alternatives. A Federal District Court ruled in favor of the City (*City of New York* v. *EPA*, 543 F. Supp. 1084 (S.D.N.Y. 1981)). The Court ordered EPA to revise its regulations to comport with this decision and allowed New York City to continue dumping until EPA determined whether the dumping unreasonably degraded the environment. EPA did not appeal the decision and the other eight dumpers also were allowed to continue dumping. No one else is authorized to ocean dump sewage sludge.

Legislation was introduced in both the Senate and House to reverse this decision and end sewage sludge dumping at the 12 mile site. In the face of this pending legislation, EPA, on April 1, 1985, announced its decidion to close the existing 12 mile dump site in the New York Bight Apex and move the dumping to a new site off the continental shelf known as the 106 mile site (50 Federal Register 14336).

In making its decision, EPA determined that the New York Bight Apex was heavily degraded and that sludge dumping at the 12 mile site, had contributed to this degradation. Adverse impacts at the site at least in part contributed by sludge dumping include: bacterial contamination and closure of shellfish areas; perturbations in water quality in and adjacent to the site; elevated levels of toxic metals and organohalogens in bottom sediments in and near the site including known fishing areas and within five nautical miles of coastal beaches; community changes in relative abundance and diveristy of species; sublethal toxicity effects in economically valuable species; and bioaccumulation of certain metals and organohalogens in fish and shellfish.

In the Water Resources Development Act of 1986 (Public Law 99-962, codified at 33 U.S.C. 1414a), Congress confirmed EPA's decision by closing the 12 mile site to sewage sludge dumping after December 15, 1987.

The 106 mile site is off the edge of the continental shelf, 115 nautical miles from Atlantic City, New Jersey, and in much deeper waters than at the 12 mile site. Dumping at this site was thought to pose less environmental problems than at the 12 mile site because of the dispersion of dumped material which would result in relatively low concentrations of contaminants and reduced environmental impacts.

The dumping was not, however, without significant risk. According to the Office of Technology Assessment's OTA report, "Wastes in Marine Environment," sludge dumped in the ocean is contaminated with microorganisms, metals, and organic chemicals and that these materials "are of great concern even though they are dispersed." OTA found that these materials can have adverse ef-

fects even at low concentrations, they are persistent and they can accumulate in marine organisms. In addition, OTA expressed concern about the ability to identify impacts from these pollutants.

The 106 mile site was designated for dumping for a five year period beginning in March, 1986, EPA negotiated phase-out schedules with the municipalities to end dumping a the 12 mile site by the end of 1987. The dumpers did not challenge EPA's decision in court. Sludge dumping commenced at the 106 mile site on March 17, 1986. Dumping ended at the 12 mile site on December 31, 1987. All nine sludge dumpers at the 106 mile site have submitted new permit applications for dumping at the site which EPA currently is reviewing. The 106 mile site is the only area off the U.S. where ocean dumping of sewage sludge is authorized.

Subsequent to the designation, other East Coast communities began considering disposing of their sludge at the 106 mile site. Boston, for example, which is under a court order to end the discharge of its sludge out of a pipe into Boston Harbor by 1991, considered dumping its sludge at the 106 mile site. The Water Resources Development Act of 1986 limits dumping at the 106 mile site only to those authorities that were dumping at the 12 mile site.

With the onset of large scale dumping of sewage sludge at the 106 mile site in 1987, fishermen began to complain of significant decreases in catches and incidences of diseased fish which were previously not found at these depths. Some of the diseased fish have a shell disease which is associated with sewage sludge and pollution in coastal waters. This disease was found around the 12 mile dump site. Scientists are just beginning to explore the impacts that sludge dumping may be having on marine resources in the area potentially affected by sludge dumping at the 12 mile site.

A 1983 report by NOAA estimated that because of oceanographic conditions around the dump site, a 116,000 square mile area is potentially affected by dumping at the 106 mile site. The fish and shellfish in this area constitute a large portion of the commercial and recreational fisheries which contribute one billion dollars annually to coastal Atlantic States. The New England, Mid-Atlantic, South Atlantic and Gulf Fishery Management Councils all have passed resolutions calling for an end to sludge dumping.

DEVELOPMENT OF THE LEGISLATION

On February 2, 1988 Senators Lautenberg, Bradley, Chafee, Biden, and Roth introduced, S. 2030, the Ocean Dumping Reform Act. The bill would amend the Ocean Dumping Act to make it unlawful to dispose of sewage sludge at the 106 mile site after December 31, 1991. The term "sewage sludge" is defined to exclude the language referring to unreasonable degradation which was the basis of the 1981 court decision which allowed sludge dumping to continue. The bill also would require New York and New Jersey to submit to EPA within a year of the bill's enactment, and every year thereafter, a report which describes progress in meeting the 1991 deadline. EPA is required to withhold section 205(g) funds, under the Clean Water Act, from any State which fails to submit a report which the Administrator determines is consistent with the requirements of the bill. EPA also would be required to submit a

report within six months of enactment on progress in using electronic surveillance monitoring equipment to monitor and prevent the dumping of sewage sludge by vessels in transit to the 106 mile site.

On February 17, 1988, Senator Roth introduced S. 2066, which also was designed to end ocean dumping of sewage sludge. This bill would make it illegal to dump sewage sludge after December 31, 1988 unless the dumper and EPA had entered into a compliance agreement which provided that the dumping would end in not less than five years. The compliance agreement would have to include a schedule which, in the opinion of the Administrator of EPA, specifies reasonable dates to implement alternatives to ocean dumping. The bill specifies particular activities which must be included in the schedule. The bill aslo imposes penalties of not less than $5,000 and not more than $10,000 for each wet ton of sewage sludge dumped or transported for the purposes of dumping in violation of the Act. Penalties would be deposited in a newly created Clean Oceans Fund. Moneys in the Fund would be available to the extent provided for in advance in appropriation Acts for expenditure by the Administator of EPA for monitoring and enforcement activities under the act and to the Secretary of Commerce for carrying out monitoring and research programs under the Act.

SECTION-BY-SECTION ANALYSIS

The reported bill is an amended version of S. 2030 which includes provisions of S. 2066 and several other changes. The provisions of the bill are described below.

Section 1. Short title

This section provides that this Act may be cited as the "Ocean Dumping Reform Act of 1988."

Section 2. Findings

The Congress finds that: ocean dumping of sewage sludge contributed to the severe environmental degradation in the New York Bight Apex; sewage sludge dumped at the 106 mile dump site contains pollutants similar to those which adversely affected the New York Bight Apex; ocean dumping of sewage sludge poses real but undetermined risks to the marine environment; the 106 mile site is the only area in the United States where ocean dumping of sewage sludge occurs; over 100 municipalities which had ocean dumped their sewage sludge have developed and implemented alternatives to ocean dumping of sewage sludge; and practical alternatives exist to ocean dumping of sewage sludge.

Section 3. Policy

This section provides that it is the policy of the United States to end the ocean dumping of sewage sludge as soon as possible but not later than December 31, 1991.

Section 4. Definitions

This section amends the Ocean Dumping Act to define the term "sewage sludge" and amends the definition of "sewage sludge"

found in section 4(d) of Public Law 95-153 (33 U.S.C. 1412a (d)). The reported bill defines "sewage sludge" to mean any solid, semisolid, or liquid waste generated by a wastewater treatment plant. EPA would be precluded from determining whether or not the sewage sludge may unreasonably degrade or endanger human health, welfare or amenities, or the marine environment, ecological systems and economic potentialities." These changes are made to reverse the 1981 District Court decision which allowed ocean dumping of sewage sludge to continue. In that case, the Court found that sludge dumping by New York City had not "unreasonably degraded or endangered human health . . .".

Narrowing the definition of sewage sludge is appropriate for several reasons. First, throwing away wastes is the least appropriate form of waste management. Second, it is difficult to monitor the harmful effects of dumping sewage sludge in the ocean. Finally, there is no way to clean up dumped sludge if such dumping is determined to be harmful in the future.

The section also defines the term "interim site" to refer to the 106 mile site designated by EPA in 49 Federal Register 18005.

Section 5. Prohibition on ocean dumping of sewage sludge

This section adds a new section 104B to the Ocean Dumping Act.

Subsection (a) prohibits the Administrator from issuing a permit to authorize any person not now dumping sewage sludge in the ocean, to dump, or to transport for the purposes of dumping, sewage sludge into ocean waters. This provision takes effect on the date of enactment of this Act. The Administrator only can authorize the existing dumpers, known as eligible authorities in this section, to dump sewage sludge in the ocean pursuant to the provisions of this Act. The eligible authorities are New York City and Nassau and Westchester Counties in New York and from New Jersey, the Bergen County Utilities Authority, the Joint Meeting of Essex and Union Counties, the Linden Roselle Sewerage Authority, the Middlesex County Utilities Authority, the Passaic Valley Sewerage Commission and the Rahway Valley Seweage Authority.

Subsection (b) prohibits the dumping, or the transportation for the purpose of dumping, into ocean waters of sewage sludge six months after the date of enactment of this Act except as provided in subsection (c).

Subsection (c) provides that the Administrator may issue permits to the eligible authorities to dump, or to transport for the purposes of dumping, sewage sludge at the 106 mile site, if the eligible authority enters into a compliance agreement with the Administrator of EPA and the State in which the dumper is located within 6 months after enactment of the Act. States are involved in this process because the States are likely to be involved in issuing permits for land-based alternative sludge management practices.

The compliance agreement would provide a plan which the Administator finds, if followed by the sluge dumper, will result in the cessation of ocean dumping of sewage sludge through the design, construction and full operation of a system for the management of sewage sludge other than by ocean dumping. This land-based management system (or systems if more than one is utilized) is referred to as the "alternative system." Consistent with the policy of the

Act that the ocean dumping of sewage sludge be ended as soon as possible the plan must provide for the phasing-out of ocean dumping prior to the final deadline of December 31, 1991 if the Administrator determines a phase-out schedule to be feasible.

The plan also may include the adoption of an interim system for the management of sewage sludge other than by dumping into ocean waters until an alternative system is placed in full operation. The provision dealing with interim systems is intended to assure that every effort is made to end ocean dumping of sewage sludge at the earliest possible time. The Committee is aware of testimony by New York City Mayor Ed Koch before the House Merchant Marine and Fisheries Committee in 1979 in which the Mayor indicated that the City would be able to achieve the 1981 deadline through the use of interim disposal mechanisms. The City of Boston, which is under court order to cease discharging its sewage sludge into Boston Harbor by the end of 1991, also will implement an interim solution to meet this deadline. If the eligible authority is not able to implement an alternative system by the end of 1991, it should evluate all interim options and implement any appropriate interim alternatives.

The compliance agreement also must include a schedule that the Administrator determines to specify reasonable dates by which the dumpers shall complete the various activities necessary for the timely implementation of the plan. The plan must include a schedule for: determining the kind of alternative system to be implemented; preparing engineering designs and related specifications; compliance with appropriate Federal, State, and local regulatory requirements; site and equipment acquisitions; construction and testing; and complete operation of the alternative system.

Subsection (d) provides that the Administrator and the Governor of the State in which the eligible authority is located shall have a continuing responsibility to evaluate the compliance of the eligible authorities with the schedule included in the compliance agreement. Each eligible authority has a continuing responsibility to advise the Administrator and the Governor of the State in which the eligible authority is located of any problems the eligible authority has with achieving the schedule included in the compliance agreement.

Subsection (e) makes it unlawful, notwithstanding any other provision of law, for any person to dump, or to transport for the purpose of dumping, sewage sludge into ocean waters after December 31, 1991. A tight deadline, together with tough penalties, is the best way to expeditiously end the ocean dumping of sewage sludge. It should be noted that the New Jersey Legislature recently passed a bill requiring New Jersey dumpers to end their dumping by March, 1991.

The subsection also makes it unlawful for any eligible authority to dump, or to transport for the purposes of dumping, sewage sludge at the 106 mile site if the Administrator determines that the eligible authority is not fully in compliance with the schedule included in the compliance agreement. This provision is intended to assure that the sewage sludge dumpers implement alternatives to ocean dumping at the earliest possible time.

Subsection (f) requires the Governors of New York and New Jersey to submit to the Administrator on June 30, 1989, and every year thereafter until the cessation of all ocean dumping of sewage sludge, reports which describe the efforts of the eligible authorities to comply with the schedule included under the compliance agreement and the State's activity regarding any permit for the construction and operation of the eligible authority's alternative system.

If the Governor fails to submit a report which the Administrator determines to be consistent with the requirements of this section, the Administrator shall withhold funds reserved for such State under section 205(g) of the Federal Water Pollution Control Act. Under this section, the Administrator makes grants to States to manage the construction grants program and permit programs under sections 402 and 404 of the Clean Water Act. Funds withheld pursuant to this section may, at the discretion of the Administrator, be restored to a State upon compliance with this section.

Subsection (g) requires the Administrator to submit a report to the Congress reviewing progress made toward implementing alternatives to ocean dumping of sewage sludge and potential obstacles to meeting the 1991 deadline. The report must be submitted within three months of receipt of the reports submitted by the Governors.

Subsection (h) requires the Administrator, within three months of enactment of this Act, to advise the eligible authorities on available alternative sludge management technologies to the ocean dumping of sewage sludge.

Subsection (i) establishes civil penalties for violation of the provisions of this section. The Ocean Dumping Act provides a maximum $50,000 civil penalty for violations of the Act. In lieu of this civil penalty, the subsection requires the Administrator to assess a civil penalty of not less than $20, and not more than $40, for each wet ton of sewage sludge that is dumped, or transported for the purposes of being dumped, into ocean waters. The Administrator may treat the substantial compliance of any dumpers with the requirements of this section as full compliance if the dumper can show that circumstances beyond its control resulted in it achieving less than full compliance. The Administrator may not, however, treat the substantial compliance of any dumper with the requirements of this section as full compliance for any violation of the 1991 deadline. Any eligible authority dumping sewage sludge in the ocean after 1991 is in violation of the Act without exception.

Penalties provided in this legislation are intended as a financial incentive for the eligible authorities to comply with the 1991 deadline. To provide such effective incentive, the penalties are set to exceed the anticipated annual cost of implementing land-based management alternatives.

In New York City, for example, has estimated that its annual cost for operation and maintenance and debt service for a land-based alternative could be as high as $60 million. The existing maximum $50,000 per violation civil penalty, which would result in a maximum civil penalty of $15 million per year if New York City dumped sewage sludge 300 times a year, does not provide such an incentive. The penalty provision in the reported bill would result in a civil penalty between $72 and $144 million.

In determining the size of the penalty within the statutory limits, the Administrator shall ensure that the penalty provides the appropriate incentive to end ocean dumping of sewage sludge at the earliest possible time. The Administrator also may consider the factors in Section 105 for determining the size of the penalty. These factors include the gravity of the violation, prior violations and the demonstrated good faith of the person charged in attempting to achieve rapid compliance after notification of a violation.

Subsection (j) requires the Administrator to prescribe by regulation and collect fees for ocean dumping of sewage sludge authorized under this section to recover the costs incurred or expected to be incurred in undertaking: measures by Federal agencies to determine compliance with the compliance agreement and any other terms under which the dumping is authorized; and monitoring and any associated research necessary to make a reasonable assessment of the effects on the marine environment caused by ocean dumping of sewage sludge. Fees recovered under this subsection shall be deposited in the Clean Oceans Fund established pursuant to subsection (k).

Subsection (k) establishes the Clean Oceans Fund in the United States Treasury. The Fund will be made up of civil penalties collected for violations of this section and permit fees. Moneys from the Fund shall be available, to the extent provided for in advance in appropriation Acts, for expenditure by the Administrator to carry out monitoring and enforcement under the Act and to issue grants to implement technologies and management practices necessary for controlling pollutant inputs adversely affecting the New York Bight as identified in the New York Bight Restoration plan required to be prepared pursuant to Public Law 100–220. Moneys from the Fund also are available to the Coast Guard to carry out surveillance and enforcement activities using state-of-the-art technologies. Moneys received under this subsection are to be treated as supplemental to, and not in lieu of, any other funding that is authorized or appropriated for these purposes.

Subsection (l) requires the Administrator, in cooperation with the Administrator of NOAA, to design and implement a program to monitor environmental conditions at the 12 mile and the 106 mile sites and within the potential areas of influence of sewage sludge dumped at these sites. The program shall include sampling of an appropriate number of fish and shellfish species and other benthic organisms to assess the effects of environmental conditions on living marine organisms in these areas. In conducting the program, the Administrator is required to make use of satellite and other advanced technologies. The Administrator, in cooperation with the Administrator of NOAA, shall submit to the Congress within one year a report which describes the monitoring plan and the results of the program conducted during this period. The Administrator is to conduct the monitoring program for as long as is necessary to determine the effects of dumping and the restoration of the affected ecosystems adversely affected by sewage sludge dumping.

Subsection (m) requires the Administrator, in consultation with the Secretary of Transportation, to submit a report to Congress within 6 months after the date of enactment of this Act, outlining progress in using electronic monitoring equipment and other

means to monitor and prevent the dumping of sewage sludge by vessels in transit to the 106 mile site. Funds for the Ocean Dumping Surveillance System (ODSS) were appropriated to the Coast Guard in its fiscal year 1988 appropriation. The ODSS devices consists of a computer onboard sludge vessels that communicates with a Coast Guard computer, revealing vessel location. Sensors in the hull detect when the dumping operation takes place. The report must include a status of installation and use of the ODSS system and any problems encountered in using the system.

Subsection (n) requires the Administrator to provide a reasonable opportunity for the public to participate in the review of the establishment and implementation of compliance agreements established pursuant to this section. The Administrator should establish appropriate review mechanisms which are consistent with the timeframes established under this section.

Section 6 makes conforming changes. Subsection (a) amends Public Law 95–153 to establish a December 31, 1991 deadline for ending the ocean dumping of sewage sludge. Subsection (b) deletes the requirement in Public Law 100–220 that the New York Bight Restoration plan include a comprehensive assessment of alternatives to dumping of municipal sludge. Subsection (c) deletes the requirement in Public Law 100–220 which requires a preliminary report on the comprehensive assessment of alternatives to sludge dumping by January 1, 1990. The timeframe for this analysis will not assist the sludge dumpers in determining which alternatives to select.

Section 7 adds the Barataria-Terrebonne Estuary Complex in Louisiana to the list of estuaries included in the National Estuary Program established in the Clean Water Act Amendments of 1987.

The Barataria-Terrebonne Bay complex is among the most significant in Louisiana and the Nation. The Bay is experiencing very high rates of coastal wetlands loss, estimated at between 40 and 60 square miles each year. These changes are a threat to fisheries in the Bay, which are a significant portion of the total fisheries in the State, which are valued at over $300 million per year. The State of Louisiana has submitted the Bay for study under the National Estuaries Program.

HEARINGS

On February 18, 1988, the Subcommittee on Environmental Protection and the Subcommittee on Superfund and Environmental Oversight held a joint hearing on issues relating to implementation of the Ocean Dumping Act. Testimony was received from Senator William Roth of Delaware, Congressman James Florio of New Jersey, Governor Tom Kean of New Jersey, Mayor Ed Koch of New York City, representatives of EPA, the Army Corps of Engineers, fishing interests, environmental organizations, the Passaic Valley Sewerage Commissioners and the New Jersey Institute of Technology.

The Subcommittee on Environmental Protection held a hearing on marine environmental conditions and trends on April 20, 1988. Testimony at this hearing addressed the sewage sludge dumping issue.

ROLLCALL VOTES

Section 7(b) of rule XXVI of the Standing Rules of the Senate and the rules of the Committee on Environment and Public Works require that any rollcall votes taken during consideration of this bill be announced in this report.

There were as rollcall votes taken during the Subcommittee on Environmental Protection's consideration of this bill. During the Subcommittee markup on June 21, 1988, the Subcommittee approved an amendment in the nature of a substitute to S. 2030 offered by Senators Lautenberg and Chafee. The Subcommittee also approved an amendment offered by Senator Breaux to add the Barataria-Terrebonne Estuary Complex in Louisiana to the list of estuaries included in the National Estuary Program established in the Clean Water Act Amendments of 1987. The bill was ordered reported by voice vote.

On June 23, 1988, the full committee, by a voice vote, ordered S. 2030 reported as amended in subcommittee.

REGULATORY IMPACT

Section 11(b) of rule XXVI of the Standing Rules of the Senate requires the Committee to evaluate the regulatory impact of the reported bill. The bill will not have any impact except on the nine existing dumpers. The bill will impose an increase in the costs for those dumpers while they are dumping as a result of the permit fee. The dumpers are also expected to face additional costs in development of land based alternatives beyond the current costs of ocean dumping at the 106 mile site. The Office of Technology Assessment reports total costs of ocean dumping at the 106 mile site at $58.2 million. Assessment of the differences in costs of ocean dumping and land disposal is uncertain because specific land disposal alternatives have not yet been selected. In addition, it is important to note that the EPA currently has the discretion to deny ocean dumping permits and require the adoption of land-based sludge management methods.

COST OF LEGISLATION

Section 403 of the Congressional Budget and Impoundment Control Act requires each report to contain a statement of the cost of the reported bill prepared by the Congressional Budget Office. That statement follows:

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, July 25, 1988.

Hon. QUENTIN N. BURDICK,
Chairman, Committee on Environment and Public Works,
U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has reviewed S. 2030, a bill to amend the Marine Protection, Research, and Sanctuaries Act, as ordered reported by the Senate Committee on Public Works, June 23, 1988.

Bill purpose

S. 2030 would amend the Marine Protection, Research, and Sanctuaries Act of 1972 (MPRSA) to end all ocean disposal of sewage sludge by December 31, 1991. Toward this goal, the bill would prohibit ocean disposal within six months of enactment unless undertaken by an eligible authority acting under a permit issued by the Environmental Protection Agency (EPA). Such permits could be issued only of the dumping authority enters into a compliance agreement with the EPA designed to end the practice by the 1991 deadline.

Section 5 of the bill would direct the EPA to collect fees from ocean dumpers to recover the costs of enforcing compliance agreements and monitoring the effects of dumping on the marine environment. In addition to these fees, this section would impose penalties on anyone dumping in violation of the bill or a compliance agreement. Proceeds from both fees and penalties would be deposited into a newly established Clean Oceans Fund and would be available, subject to appropriation, for program-related purposes, including the monitoring and enforcement activities carried out by the EPA, the U.S. Coast Guard, and the National Oceanic and Atmospheric Administration (NOAA). The bill would require that amounts appropriated from the fund be used to increase rather than offset other funding.

Estimated impact on the Federal budget

Assuming that sufficient funds are appropriated, CBO estimates that federal agencies would spend about $6 million a year to carry out the ocean dumping program under the MPRSA as amended by this bill. If the EPA imposes an annual fee sufficient to recover all federal costs, receipts of about that amount would be deposited to the Clean Oceans Fund each year beginning in fiscal year 1989 and ending with the cessation of dumping. Appropriation and use of fund moneys to supplement rather than offset ongoing federal expenses would result in net additional outlays of up to $6 million a year. It is expected that the EPA would spend about $2 million of this amount to improve its current monitoring program. The balance would be available for technological enhancements of federal monitoring and enforcement systems and technology grants to nonfederal parties under Section 5(k)(3)(c).

CBO expects that no penalties under Section 5 would be collected until after the mandatory cessation of dumping on December 31, 1991. After that, collections are very uncertain. The bill would require the EPA to set penalties at between $20 and $40 per wet ton of sewage dumped. If no community is able to curtail or reduce its reliance on ocean disposal by the bill's deadline, potential receipts from penalties would range between $160 million and $320 million a year. Receipts are likely to be far less than these amounts, depending on the penalty rate chosen by the EPA and on the availability, capacity and cost of alternatives. To the extent that alternatives are available to a given community, it is likely that they would be chosen if their cost is less than the combined cost of ocean disposal and expected penalty payments. A penalty set at the maximum, therefore, could generate lower receipts than a $20 pen-

alty if alternative methods would produce total costs somewhere between the two. On the other hand, even if the penalties are set high enough to deter a community from ocean dumping, available alternatives may not have sufficient capacity to end all reliance on dumping, and in some cases there may simply be no feasible alternative available by the deadline. Proceeds from whatever penalty is set would be deposited in the Clean Oceans Fund.

Impact on State and local governments

Nine communities in New York and New Jersey currently have permits for ocean dumping and would be affected by the prohibition of this practice by December 31, 1991. All of these communities will incur significant costs to develop and use alternative methods of sewage disposal as they are already required to do under current law. The provisions of S. 2030 would add to these costs by requiring the use of alternatives at a date much earlier than that now contemplated by most of the local authorities affected. Failure to meet the bill's deadline would result in the imposition of penalties under Section 5. At present, none of the nine is considered likely to meet the bill's deadline.

The maximum annual cost burden on the nine communities would be incurred if all areas must pay penalties. If the communities are not able to reduce the volume of ocean-dumped sludge, they would pay total annual penalties of between $160 million (assuming a $20/wet ton fee) and $320 million (assuming a $40 fee). Total costs would be less than these if communities are able to find alternatives for some or all of their disposal needs. Such alternatives are likely to be much more expensive than ocean dumping but may be less than the penalties set in the bill.

This estimate is based on information obtained from the EPA, NOAA, and the U.S. Coast Guard. Penalty receipt estimates have been developed on the basis of 1986 dumping volumes. If the volume of waste dumped grows over time, disposal costs and federal receipts would also increase.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Deborah Reis, who can be reached at 226–2860.

Sincerely,

JAMES L. BLUM,
Acting Director.

ADDITIONAL VIEWS OF MR. MOYNIHAN

My disagreement with the action of the Committee on S. 2030 lies not on the grounds of the bill's policy objectives, with which I agree, but with its methods. It should be the policy of the Congress to end the ocean dumping as soon as is practicable, and legislation to this end should be adopted.

The evidence to indicate that ocean dumping of sewage sludge is a significant danger to the environment is by no means definitive. The Congressional Office of Technology assessment stated in its report "Wastes in Marine Environments" (April, 1987):

> It is essential, therefore, to consider whether there are conditions under which open ocean disposal might be environmentally acceptable. Some wastes (e.g. sewage sludge, dredged material, and acid and alkaline wastes) probably can be dumped in ocean waters, if levels of toxic pollutants in the waste are low, without causing significant long term impacts. (p. 34)

Nevertheless, I concur with the opinion of the Committee that, as a matter of public policy, the ocean dumping of sewage sludge should end. Although the full environmental consequences of this practice have yet to be determined, and there is significant disagreement in the scientific community regarding the conclusions that should be drawn from existing data, the potential danger posed by ocean dumping is too large. As stated in the Majority Views of this Report, if, at some future time, there is a consensus that ocean dumping is a more serious threat to human health and the environment than had been believed, there will be no way to clean up the sludge that has already been dumped.

Therefore, my disagreement with S. 2030 as reported by the Committee concerns the particular requirements it would impose to end ocean dumping. The bill would ban all ocean dumping of sewage sludge after December 31, 1991, and would impose large financial penalties on anyone violating this prohibition. The proposed penalties, $20 to $40 per wet ton of sludge dumped, are greatly in excess of any other penalty allowed under the Marine Protection, Research and Sanctuaries Act (33 U.S.C. 1401 et seq). The maximum penalty for violation of any other portion of the act is $50,000 per violation. In the case of sludge dumped by the City of New York, the existing penalties would amount to approximately $15 million per year. The penalties contained in the bill reported by the Committee would range from $72 to $144 million per year, assuming New York City continues to dump 3.6 million wet tons of sludge per year.

The rationale behind these large penalties, which have been deliberately set at a level significantly higher than the cost of implementing alternative sludge disposal methods, is to encourage

dumpers to adopt these alternative methods as quickly as possible by making this the financially preferable option. This type of incentive is valid only when there is an actual choice to be made regarding whether or not to comply with the December 31, 1991 ban. In such a case, large penalties would service as an effective disincentive to violations of the Act. However, as pointed out in testimony before the Committee on February 18, 1988 by Mayor Edward I. Koch of New York City:

> For example, for New York City it would take at least 10 years and $218 million in capital costs to construct a land-based compost system and $60 million in annual operating costs thereafter. An incineration system would take at least 15 years and $477 million in capital costs to construct.

Given the unavoidable time constraints that exist on placing alternative sludge disposal systems into operation, it is unrealistic for the Committee to expect that the 9 municipalities currently dumping at the 106-mile site have any ability to end ocean dumping before Deceber 31, 1991, regardless of the mandates of any federal or State law. The City of New York estimates that the earliest possible date by which it could end ocean dumping would be the year 1999, and they believe this estimate to be very optimistic.

Because of the clear inability of those using the 106-mile site to cease ocean dumping before December 31, 1991, the penalties established in subsection 5(i) of S. 2030 will not serve their intended purpose—to encourage dumpers to make a conscious choice to meet the deadline. The effect of the deadline and penalties contained in the bill will be to force those who have dumped legally for many years to incur unavoidable financial penalties due to circumstances beyond their control. Further, the strict dates and penalties in the bill will do little to advance the actual date on which ocean dumping will cease. If anything, these penalties will reduce the financial resources available for the construction of alternative disposal systems, and may postpone the actual cessation of ocean dumping.

The Committee report on the bill states that over 100 municipalities that at one time disposed of sludge in the ocean have adopted land based alternatives. It should be noted that none of these municipalities produce anywhere near the quantity of sludge as do those currently using the 106-mile site, and that their experience does not necessarily apply to the current situation. The quantity of sludge produced by these municipalities represents only 5 percent of the sludge now being dumped at the 106-mile site. The volume of sludge dumped at the 106-mile site is very large (approximately 7.7 million wet tons per year) and consideration must be given to the practical limitations on how long it will take to implement alternatives, even if every effort is made to expedite the process.

In addition to the December 31, 1991 prohibition on dumping contained in subsection 5(e) of S. 2030 as reported, subsections 5(b) and 5(c) require eligible authorities to enter into a compliance agreement with the Environmental Protection Agency within six months of the date of enactment. If this date is not met, all ocean dumping is prohibited immediately. Six months is insufficient time for development of a realistic and detailed plan of compliance that

will dictate the actions of the eligible authorities for years to come. The requirement for public participation in the establishment and implementation of compliance agreements contained in subsection 5(n) will make this six month deadline even more difficult to meet.

I should reiterate that I favor the cessation of ocean dumping as soon as possible, and I commend the Committee and Senator Lautenberg in particular for their work to bring this issue to the attention of the Congress. However, during consideration of this bill on the Senate floor, and in Conference Committee with the House of Representatives should that point be reached, I urge my colleagues to consider the arguments I have made and adopt a modified approach. As reported by the Committee, S. 2030 will not end ocean dumping any sooner than would a bill that includes realistic dates that could be met given good faith efforts. Realistic dates are essential so that the Act's financial penalties will serve as a real incentive to develop alternative disposal methods as quickly as possible. Without realistic dates, the penalties become purely punitive measures.

DANIEL PATRICK MOYNIHAN.

CHANGES IN EXISTING LAW

In the opinion of the Committee, it is necessary to dispense with the requirements of section 12 of rule XXVI of the Standing Rules of the Senate in order to expedite the business of the Senate.

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